

Listing of Claims

This listing of claims will replace all prior versions, and listings, of the claims in this application.

Claim 1 (currently amended): A statechart system for use in the development of avionic software, the avionic software requiring deterministic behavior, the statechart system comprising:

a statechart stored on a computer readable medium, the statechart comprising:

a first state;

a second state; and

a third state, the third state including the first state and the second state, the first state being parallel to and simultaneously active with the second state when the third state is active, wherein the first state is ordered with respect to the second state, whereby the statechart does not allow parallel states to be unordered to ensure the deterministic behavior of the statechart.

Claim 2 (currently amended): The statechart system of claim 1 further comprising:

a fourth state in parallel and simultaneously active with the first state and the second state and included within the third state, the third fourth state being ordered with respect to the first state and the second state.

Claim 3 (currently amended): The statechart system of claim 2 further comprising:

a fifth state in parallel and simultaneously active with the first state, the second state and the fourth state and included within the third state, the fourth fifth state being ordered with respect to the first state and the second state and the third fourth state.

Claims 4-5 (canceled)

Claim 6 (previously presented): The statechart system of claim 1 wherein the avionic software is a graphical flight planner.

Claim 7 (currently amended): A modified Harel statechart system formed on a computer, the modified Harel statechart system comprising:

a modified Harel statechart formed on a computer, the modified Harel statechart including a mathematical representation of a group of states, the group of states including a first state including a plurality of ordered parallel, states that are simultaneously active when the first state is active, the mathematical representation ensuring deterministic operation.

Claim 8 (canceled)

Claim 9 (previously presented): The modified Harel statechart system of claim 7 wherein the group of states are represented mathematically.

Claims 10-13 (canceled)

Claim 14 (currently amended): A method of providing avionic software, the method comprising:

providing a graphical representation of a state including a plurality of parallel states, the parallel states being simultaneously active and ordered with respect to each other and simultaneously active when the state is active, the parallel states being ordered so that only one of a plurality of substate states of the parallel, simultaneously active states is active in response to a particular event; and

applying the mathematical representation to an execution engine to create the avionics software.

Claim 15 (original): The method of claim 14 wherein the avionics software is fully deterministic.

Claims 16-20 (canceled)